



Substitute Form PTO-1449 (Modified) Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 01997-273003	Application No. 09/832,959
	Applicant Moungi G. Bawendi et al.		
	Filing Date April 12, 2001	Group Art Unit 1641	JUL 10 2001

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U.S. Patent Documents							
Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
u	AA	5,990,479	Nov. 1999	Weiss et al.			
↓	AB	5,985,353	Nov. 1999	Lawton et al.			
u	AC	5,751,018	May 1998	Alivisatos et al.			
u	AD	5,505,928	Apr. 1996	Alivisatos et al.			

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
Examiner Initial	Desig. ID	Document						
u	AE	Matsumoto et al. (1996). Preparation of monodisperse CdS Nanocrystal by size selective Photocorrosion. J. Phys. Chem. 100(32):13781-13785.						
↓	AF	Dabbousi et al. (1997). (CdSe)ZnS core-shell quantum-dots: synthesis and characterization of a size series of highly luminescent nanocrystal. J. Phys. Chem. B. 101:9463-9475.						
	AG	Coffer et al. (1992). Characterization of quantum confined CdS nanocrystallites stabilized by deoxyribonucleic acid (DNA). Nanotechnology. 3:69-76.						
	AH	Mahtab et al. (1995). Protein-sized quantum dot luminescence can distinguish between "straight", "bent", and "kinked" oligonucleotides. J. Am. Chem. Soc. 117:9099-9100.						
	AI	Nirmal et al. (1996). Fluorescence intermittency in single cadmium selenide nanocrystals. Nature. 383:802-804.						
	AJ	Bawendi et al. (1992) Luminescence properties of CdSe quantum crystallites: resonance between interior and surface localized states. J. Chem. Phys. 96(2):946-954.						
	AK	Correa-Duarte et al. (1998). Stabilization of CdS semiconductor nanoparticles against photodegradation by silica coating procedure. Chem. Phys. Lett. 286:497-501.						
	AL	Norris et al. (1996). Measurement and assignment of the size-dependent optical spectrum in CdSe quantum dots. Physical Review B. 53(24):16338-16346.						
	AM	Norris et al. (1996). Size dependence of exciton fine structure in CdSe quantum dots. Physical Review B, 53(24): 16347-16354.						
	AN	Hines et al. (1996). Synthesis and characterization of strongly luminescing ZnS-Capped CdSe nanocrystals. J. Phys. Chem. 100:468-471.						
	AO	Mahtab et al. (1996) Preferential adsorption of a "kinked" DNA to a neutral curved surface: comparisons to and implications for nonspecific DNA-protein interactions. J. Am. Chem Soc. 118:7028-7032.						
	AP	Murphy et al. (1997) Quantum dots as inorganic DNA-binding proteins. Mat. Res. Soc. Symp. 452:597-600.						
↓	AQ	Lawless et al. (1995). Bifunctional capping of CdS nanoparticles and bridging to TiO ₂ . J. Phys. Chem. 99:10329-10335.						
u	AR	Alivisatos (1996). Perspective on the physical chemistry of semiconductor nanocrystals. J. Phys. Chem. 100: 13226-13239.						

Examiner Signature <i>C. Chin</i>	Date Considered <i>12/14/02</i>
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified) Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 01997-273001	Application No. 09/160,454-832,959
	Applicant Moungi G. Bawendi et al.		
	Filing Date September 24, 1998	Group Art Unit 1641	

U.S. Patent Documents

Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA						
	AB						
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Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
<i>u</i>	AL	WO 98/04740	02-05-98	PCT				
<i>u</i>	AM	WO 98/33070	07-30-98	PCT				
	AN							
	AO							
	AP							

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
	AQ	
	AR	
	AS	
	AT	

Examiner Signature <i>C. Chin</i>	Date Considered <i>12/24/98</i>
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Form PTO-109 (REV 8-83) U.S. Department of Commerce Patent and Trademark Office

Atty. Docket No. 0492611-0290 Serial No. 09/160,454-832,959

Applicant Bawendi, *et al.*

Filing Date Sep. 24, 1998 Group 1743-1641

Information Disclosure Citation
(Use several sheets if necessary)

U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
u	5,293,050	Mar. 8, 1994	Chapple-Sokol, <i>et al.</i>	257	17	
	5,354,707	Oct. 11, 1994	Chapple-Sokol, <i>et al.</i>	437	106	
	5,422,489	Jun. 6, 1995	Bhargava	250	488.1	
	5,505,928	Apr. 9, 1996	Alivisatos, <i>et al.</i>	423	299	
u	5,525,377	Jun. 11, 1996	Gallagher, <i>et al.</i>	427	512	
u	5,751,018	May 12, 1998	Alivisatos, <i>et al.</i>	257	64	

FOREIGN PATENT DOCUMENTS

	Document Number	Date	Country	Class	Subclass	Translation	
						Yes	No
u	98/19963	May 14, 1998	WO				

OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, Etc.)

u	Spanhel, <i>et al.</i> , "Photochemistry of Colloidal Semiconductors. Surface Modification and Stability of Strong Luminescing CdS Particles," <i>J. Am. Chem. Soc.</i> 109(19):5649-5655, 1987.	
	Kortan, <i>et al.</i> , "Nucleation and Growth of CdSe on ZnS Quantum Crystallite Seeds, and Vice Versa, in Inverse Micelle Media," <i>J. Am. Chem. Soc.</i> 112:1327-1332, 1990.	
	Coffer, <i>et al.</i> , "Characterization of quantum-confined CdS Nanocrystallites stabilized by deoxyribonucleic acid (DNA)," <i>Nanotechnology</i> 3:69-76, 1992.	
u	Murray, <i>et al.</i> , "Synthesis and Characterization of Nearly Monodisperse CdE (E=S, Se, Te) Semiconductor Nanocrystallites," <i>J. Am. Chem. Soc.</i> 115(19):8706-8715, 1993.	
u	Whitesell, <i>et al.</i> , "Directionally Aligned Helical Peptides on Surfaces," <i>Science</i> 261:73-76, July 1993.	

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Form PTO-1449 P.E. JC132 (REV 8-83)	U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No. 0492611-0290	Serial No. 09/160,454- 831,959
Information Disclosure Citation (Use several sheets if necessary)		Applicant Bawendi, <i>et al.</i>	
		Filing Date Sep. 24, 1998	Group 1743 1641

u	Rajh, <i>et al.</i> , "Synthesis and Characterization of Surface-Modified Colloidal CdTe Quantum Dots," <i>J. Phys. Chem.</i> 97:11999-12003, Nov. 1993.	
	Colvin, <i>et al.</i> , "Light-emitting diodes made from cadmium selenide nanocrystals and a semiconducting polymer," <i>Nature</i> 370(6488):354-357, August 4 1994.	
	Lawless, <i>et al.</i> , "Bifunctional Capping of CdS Nanoparticles and Bridging to TiO ₂ ," <i>J. Phys. Chem.</i> 99:10329-10335, 1995.	
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	Alivisatos, "Perspectives on the Physical Chemistry of Semiconductor Nanocrystals," <i>J. Phys. Chem.</i> 1996(100):13226-13239, 1996.	
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	Matsumoto, <i>et al.</i> , "Preparation of Monodisperse CdS Nanocrystals by Size Selective Photocorrosion," <i>J. Phys. Chem</i> 100(32):13781-13785, 1996.	
	Rogach, <i>et al.</i> , "Synthesis and Characterization of Thiol-Stabilized CdTe Nanocrystals," <i>Ber. Bunsenges. Phys. Chem.</i> 100(11):1772-2778, 1996.	
	Hines, <i>et al.</i> , "Synthesis and Characterization of Strongly Luminescing ZnS-Capped CdSe Nanocrystals," <i>J. Phys. Chem.</i> 100:468-471, January 1996.	
	McGall, <i>et al.</i> , "Light-directed synthesis of high-density oligonucleotide arrays using semiconductor photoresists," <i>Proc. Natl. Acad. Sci. USA</i> 93:13555-13560, November 1996.	
u	Chee, <i>et al.</i> , "Accessing Genetic Information with High-Density DNA Arrays," <i>Science</i> 274(5287):610-614, Oct. 25 1996.	

C. Ch. 12/29/96

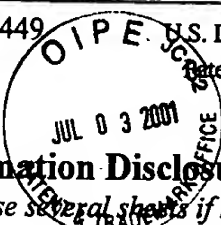
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Form PTO-1049 (REV 8-88) U.S. Department of Commerce Patent and Trademark Office Information Disclosure Citation (Use several sheets if necessary)	Atty. Docket No. 0492611-0290	Serial No. 09/160,454 832, 959
	Applicant Bawendi, <i>et al.</i>	
	Filing Date Sep. 24, 1998	Group 1743 1641

u	Empedocles, <i>et al.</i> , "Photoluminescence Spectroscopy of Single CdSe Nanocrystallite Quantum Dots," <i>Phys. Rev. Lett.</i> 77(18):3873-3876, October 1996.	
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C. Chin 12/24/02

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Form PTO-1449 (REV 8-83)	U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No. 0492611-0290	Serial No. 09/160,454 832,959
<div style="text-align: center;">  <p>Information Disclosure Citation (Use several sheets if necessary)</p> </div>		Applicant Bawendi, <i>et al.</i>	
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✓	Bruchez, <i>et al.</i> , "Semiconductor Nanocrystals as Fluorescent Biological Labels," <i>Science</i> 281:2013-2016, September 1998.	
✓	Chan, <i>et al.</i> , "Quantum Dot Bioconjugates for Ultrasensitive Nonisotopic Detection," <i>Science</i> 281:2016-2018, September 1998.	
✓	Lett, "Color-Coding Quantum Dots Debut With Promising Careers In Clinical Diagnostics Field," :1-2, Sept. 25 1998.	
Examiner <i>c. cl.</i>		Date Considered 12/24/00

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